The coolest periods were on the 1st in portions of the central valleys, but mainly during the last decade over the remaining portions of the country. Readings below freezing were reported in all the northern border states. The lowest observed was 14° in the mountains of Oregon.

#### PRECIPITATION

August was, for most of the country, one more dry month in a year in which, up to date, months of well dis-

tributed and ample rainfall have been few.

The regions west of the Rocky Mountain Divide had usually more rainfall than normal, with comparatively good distribution, although amounts were especially large for the region in a few localities, causing damage by flood. The northern part of the eastern slope of the Rockies was well watered, likewise much of the southern Plains and of the middle Mississippi Valley.

The Plains from central Nebraska northward had a considerable shortage as had most of Oklahoma and central and eastern Texas, while nearly all the eastern

half of the country had a decided deficiency.

The drought in August was remarkably severe in the southern Appalachian region, including the western portions of the Carolinas, the eastern two-thirds of Tennessee, and the northern two-thirds of Georgia. In this region July had been comparatively dry, and remarkably so in western North Carolina. As a result the most serious drought within the memory of old people prevailed widely as August ended, many deep wells having failed, small streams being dry where never so known before, rivers being at extremely low stages, and hydroelectric service greatly restricted.

The average rainfall at points in Alabama was the least for August since the weather service was organized, more than 50 years ago. The shortage was well marked throughout the lower Mississippi Valley, and thence north to southwestern Missouri, also northeast to west-

ern Pennsylvania.

In Minnesota and northwestern Iowa and thence eastward to include northern Michigan, except the immediate shore of Lake Superior, there was likewise remarkably little precipitation and forest fires were unusually trouble-some for August. In nearly all of New York and New England August was a remarkably dry month, but here July had generally brought ample rain, save in Maine, so usually conditions were not unfavorable. From southern Massachusetts to northern Florida the majority of the coast districts had considerable rain, though almost nowhere as much as normal.

The one eastern district of marked excess was in the Florida Peninsula, where numerous stations had twice their usual large August falls, one station in Dade County

recording 17.56 inches.

The year 1925 to date has been marked by prolonged dryness over practically all the Gulf States and large areas to the northeast. In Texas every month of 1925 to date has averaged drier than normal and from Louisiana to Alabama and the eastern portions of Tennessee, northern Georgia, and the western portions of the Carolinas and Virginia every month except January. Likewise toward the northeast as far as the southern lake region each state shows six or seven months out of the eight from January to August, inclusive, deficient in precipitation.

In Arkansas and Tennessee the average deficiency for each State for the eight-month period is about 13 inches, and in Louisiana, Mississippi and Alabama over 10 inches, while over the western third of North Carolina it

is almost 18 inches.

#### RELATIVE HUMIDITY

The percentages of relative humidity were less than normal over nearly all portions of the country from the Great Plains eastward, the principal exceptions being locally over a narrow area from the lower Mississippi Valley northeastward to the Great Lakes. From central Texas and the southern Plains eastward to the Atlantic Coast it ranged from 15 to nearly 30 per cent less than normal.

### SEVERE LOCAL HAIL AND WIND STORMS, AUGUST, 1925

The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path, yards 1	Loss of life	Value of property destroyed	Cbaracter of storm	Remarks	Authority
Fleming, Colo. (near)	1	P. m				Hail and wind	Trees, fences and several barns blown down;	Official, U. S. Weather Bu-
Dallas County, Iowa	2		 			Hail	some crop damage. Character of damage not reported	Do.
Beaver County, Okla	3		4 mi.			Destructive hail	Heavy loss of crops; residences and other build- ings damaged; poultry and cattle killed. Path 8 miles long.	Do.
Clark, Fayette and Bourbon	3				\$125,000	Hail	About 300 acres of tobacco destroyed and corn damaged.	Do.
Counties, Ky. Berlin, N. H.	3	12. 45-1. 20	2 mi.		15,000	Severe hail		Do.
Detroit, Mich	3	p.m.				Violent hail, rain and thunder- storm.	Streets and basements flooded in some places to a depth of 18 inches.	Indianapolis Star.
Indianapolis, Ind	3					Thunderstorm	Traffic demoralized for more than an hour; foli-	Official, U. S. Weather Bu- reau; Indianapolis Star.
Tampa, Fla. (west of)	3	p. m. 5.25–8 p. m.			 	and hail. Violent thunder- storm.	age shredded; I person injured. No damage reported	Official, U. S. Weather Bu- reau.
Greensburg, Pa	3		 			Thunderstorm	Building excavation flooded; other minor damage.	Do.
Lincoln County, Wis	4	11 a. m2	3 mi.		50, 000	Heavy hail		Do.
Humboldt County, Iowa Sarasota Beach, Fla	4 4	p. m. 3.30 p. m. 5 p. m	2 mi.			Hail Small tornado	Corn damaged 80 per cent in places Two portable houses and a garage leveled; other minor damage.	Do. Do.
Pittsfield, Wis	4	5 p. m	880	<b></b>	75,000	Heavy hail	Damage principally to growing crops	Official, U. S. Weather Bu-
Mower County, Minn. (cen-	4	Р. ш	· 	·	<b>.</b>	Hail	Much damage to corn stripped by hail	Pioneer Press (Minneapolis,
tral part of). Raleigh, N. C., and vicinity.	4					Thunderstorm and high wind.	Telephone poles, chimney, and buildings of light construction damaged. Crops and fruit suffer from high wind.	Minn.). Official, U. S. Weather Bu- reau.

## MONTHLY WEATHER REVIEW

## Severe local hail and wind storms, August, 1925-Continued

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Fowler, Colo	5		1, 760		\$4,000	Hail	Vine crop and corn damaged	
Hocking County, Ohio	5	 	880	ļ	15, 000	do		Bureau. Do.
Moores Hill, Ind	5					Heavy hail	miles long. Corn and tobacco considerably injured	Do.
Williamstown, Ky	5 5 7	1.10 p. m	1, 760		10.000	Hail Heavy hail	Local crops damaged  Corn, oats, and potatoes injured	Do. Do.
Pontiac, Ill. (near)	7 8	4 p. m				Hail	Character and amount of damage not reported	Do.
-				ļ		thunderstorms.	Considerable damage by flooding	D <sub>0</sub> .
Mechanicsville, Md. (near) Roland, Iowa	8	P. m				Thundergusts Hail	Trees uprooted; tobacco and corn blown down Corn damaged	Do. Do.
Washington County, Md	8					Electrical	A barn destroyed and a cow killed near Smith- burg; water tower and house damaged in Hagerstown; 1,200 telephones out of commis-	Do
Hardin County, Iowa Harrisburg, Pa	8	5 p. m 5.37 p. m				Hail	sion. Crop loss about 10 per cent Many cellars and store basement flooded	Do. Do.
Altenwald, Pa. (near)	8	6.30 p. m	1, 320	<b>.</b>	13,000	rain. Small tornado	Crop damage estimated at \$10,000. Property	Do.
Rockwood, Calif	9			1	50,000	with heavy hail. Two tornadoes	damage small.  Eighteen buildings lifted from foundations;	Morning Sun (Yuma, Ariz.).
Talbot County, Md	9				6,000	Thundergusts	five persons injured.  Boat house on Miles River damaged; tenant	
_						1 nundergusis	house and a barn at Oxford, and a canning house at Bozman destroyed. Much corn blown down.	Official, U. S. Weather Bureau.
Dodson, La. (near)	9	5–6 p. m		1			Several persons shocked and two houses set fire by lightning.	Do.
Henderson County, Ill	9 .	4 p. m		i	1	Hail	Damage principally to growing crops but some to roofs and windows.	Do.
San Joaquin Valley, Calif. (west side of).	10	n				Thunderstorm	Oil reservoir at Coalinga struck by lightning resulting in a loss estimated at more than a million and a half dollars.	Do.
Otsego and Delaware Coun- ties, N. Y. (sections of). Sharon Springs, N. Y	10	P. m				Rain, hail and wind. Heavy hail and	Oats, corn and other crops flattened; one barn and contents valued at \$10,000 burned; farm buildings and trees damaged.	Oneonta Star (N. Y.).  Official. U. S. Weather
Suaton Springs, IV. I	10	2 p. m	1,320		10,11017	winds	Buildings blown down, windows broken; large acreage of oats and buckwheat destroyed; some corn and gardens damaged; total loss of much fruit.	Bureau.
Charles County, Md. (be- tween Lothair and Pie- cowaxen Creek).	11	1-3 a. m	1, 760		16,000	Moderate hail and and thunder- storm.	One house and two barns unroofed; much crop damage.	Do.
Jennings, Kans. (near)	11	3.30 p. m	1, 760		10,000	Violent wind and hail.	Several buildings damaged by wind; corn and field crops injured by hail.	Do.
Covington, Tenn. (near)	11			1		Wind	No property damage reported	Do.
Otero and Bent Counties, Colo.	12 12	5-6 p. m.	1-2 mi.			Hail	siderable acreage of sugar beets, cucumbers, corn and seed alfalfa destroyed; vines torn.	Do.
Terre Haute, Ind	12	5.30 p. m		1		Thunderstorm	Basements flooded in some sections, trees, signs, etc., blown down; electric service impaired.	Do.
Kans. Lincoln and Taylorville, Ili.	12	8–9 p. m	5 mi.		1	Violent wind and hail.	Many buildings damaged; crops damaged about 50 per cent by stones some of which were 5 inches in diameter.  Barns burned by lightning	Do.
(near).	12				ł			]
Rush County, Kans		P. m		l .	i	Violent wind and hail.	Farm buildings and crops damaged	Do.
Paris, Ill. (vicinity of)	12	do		)	L	Wind, rain and hail,	Fields and basements flooded; corn prostrated	Chicago American.
Ardmore, Okla	12	do		l.	i	Wind	Two persons injured and several residences damaged.	Official, U. S. Weather Bu- reau.
Denton, Tex	13	4.30–6 p.m.			75, 000	Heavy hall	Crops almost totally destroyed; considerable	Do.
East Waco, Tex	13	P. m	100	! 		Tornadic wind	Houses unroofed; trees blown down; other minor	Dallas Morning News,
Ferris, Tex., and vicinity	13					Electrical and rain	damage.  One barn damaged and one a total loss: two mules killed and one crippled; one person injured.	(Tex.). Do.
Gem and Twin Falls Coun- ties, Idaho.	13					Hail	Heavy property and crop damage; poultry killed.  Total amount of damage unestimated but there was \$40,000 to \$50,000 damage 3 miles	Official, U. S. Weather Bu- reau.
Atlanta, Ga	14	2.38 p. m		İ İ	1,000	Wind	south of Emmett. Poles prostrated; plate glass windows broken	Do.
Jacksonville, Fla	14					Thunderstorm	Two persons injured, one seriously. No prop-	Do.
Nashville, Tenn	14					and wind. Thunderstorm	erty damage reported.  Many telephones out of use; street car service impaired.	Do.
Nashville and Louisburg, N.	14	P. m			50,000	Heavy hail	Crops damaged	Do,
Raleigh, N. C	14	. <b></b>				Thunderstorm	Trees broken and power and light service inter-	Do.
Seguin, Kans	14	P. m				and wind. Small tornado	rupted. One church and several barns demolished; many cattle and other stock killed by light- ning.	Official, U. S. Weather Bureau; Kansas City Star.
Uniontown, Ala., and vicinity.	14		1, 760			Heavy hail and high wind.	Considerable damage, character of which was not reported.	Official, U. S. Weather Bureau.
Glen Cove, N. Y., and vicin-	11	β–8 թ. m			·	Hail	Electric system disabled; display window of department store destroyed.	New York Times.
Pottawattomie County, Ia	16	12.30 p. m.	3 mi.		75,000	do		Official, U. S. Weather
Detroit, Minn., and vici nity north and west of.	16				.	hail:	Several buildings damaged; trees blown down; crops flattened; electric power service inter- rupted.	Bureau. Fargo Forum (N. Dak.).
La Prairie, Ill	18	1 a. m	440	1		11	Slight damage	Official, U. S. Weather

# MONTHLY WEATHER REVIEW

Severe local hail and wind storms, August, 1925—Continued

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
From Poweshiek County southeast through Iowa, Keokuk, Washington, Jeferson, Henry, Des Moines and Lee Counties, Iowa. Parts of Hancock, Henderson, McDonough and Schuyler Counties, Ill.	18	9 a. m	6–10 mi.		\$2, 500, 000	do	Very heavy damage over large area. Poultry and stock injured or killed; path 75 miles long.	Official, U. S. Weather Bureau.
and Lee Counties, Iowa. Parts of Hancock, Hender- son, McDonough and	18	11 a. m			510, 000	Hail and wind	Heavy crop and property damage; some poul- try killed. Damage in Schuyler not included	Do.
Chattanooga, Tenn	18	1.40 p. m				Thunderstorm	in estimate. Slight damage to bridge	Do.
Murphysboro, Ill	18	3.30 p. m	880		11,000	Wind	School building badly damaged; other minor damage.	Do.
Cairo, Ill., and vicinity	18	5.20 p. m.			2, 200	do	Several hay barns blown down	Do.
Quincy, Ill. Pierre, S. Dak	18 19	9-9.25 p.m. 8.44-11.50				Violent thunder-	Gardens and trees damaged	Do. Do.
Keokuk and Washington	19	a. m. 9 a. m	 			storm. Hail	Occurred in portions of the same area covered in	Do.
Counties, Iowa. La Harpe, Hancock County, Ill.	19	11.30 a. m				do	the storm of the 18th. Slight damage added. Storm less destructive than the one in Hancock County on the 18th.	Do.
Pekin and Peoria Counties,	19	1.10 p. m	10 mi.		20, 000	Wind and hail	Some damage by hail	Do,
Ill. Vermilion County, Ill. (in and near).	19	3.30 p. m	5 mi.			do		Do.
Booneville, Ind. (near) North and central New York.	19 19	P. m			4, 500 115, 000	Heavy hail	Much tobacco ruined  Some crops entirely destroyed: buildings, trees.	Do. Do.
Harrisburg, Pa., and vicinity.	19					Thunderstorm,	Some crops entirely destroyed; buildings, trees, and wire systems damaged. Heaviest dam- age at Tupper Lake, Clayville, and Herkimer. Poles blown down, obstructing traffic; corn and	Do.
Montgomery and Henry Counties, Tenn.	19					wind and hail. Wind and hail	other crops injured by hail. Seven hundred acres of fine tobacco practically ruined by hail, some additional damage by	Do.
Louisville and Jefferson	19					Wind	wind.	Do.
Counties, Ky. Nashville, Tenn., and west	19			l	i	Thunderstorm,	One chimney and a number of trees blown	Do.
of. Berlin, N. H. Montgomery County, Ind.	19 19	Noon P. m		<b></b>	20, 000	and wind. Thunderstorm Wind.	down; other minor damage west of city.  Much damage from water.  Property damage in Darlington and Crawfords-	Do. Do.
(north part of).				ı			Noof and one wall of large garage blown in	Do.
Wagoner, Okla Haskell, Okla	i	2.15 p. m		l	Į.	Small tornado	down and benches carried several blocks.	Oklahoman (Oklahoma City, Okla.).
Henryetta, Okla	I			1		and rain.	Several automobiles damaged	Do.
Johnson City, Tenn	[			l		Electrical		Official, U. S. Weather Bu- reau.
Veedersburg, Ind	20				5,000	do	A garage and barn struck by lightning and burned, killing a horse and destroying many farm implements.	Do.
Savannah, Ga	1	4.17 p. m		l .	i	<b>!</b>	Warehouses damaged; overhead wires broken; trees uprooted.	Do.
Thrall, Tex. (east of)	l	5.30 p. m	ŀ		Į.	}	blown from foundations.	Taylor Daily Express (Tex.).
Andalusia, Ala			l		1	Electrical Thunderstorm		Official, U. S. Weather Bu- reau. Do.
Blakely, Ga Christian County, Ky				1		Hail	Four hundred fifty acres of tobacco damaged 25	Do. Do.
Echeconne, Ga Kenton, Okla	21			<b></b>	200	Wind Hail	Two small houses damaged	Do. Do.
Leesburg. Ga	21			3		Thunderstorm	No property damage reported	Do.
Leesburg, Ga. Sale City, Ga. Southport, N. C.	21 21			3		Hail	Slight damage as most crops were housed or	Do. Do.
Seabrook, Tex			1			j .	partly matured.  Many camps and shacks wrecked; 10 persons injured; path 2 miles long.	Official, U. S. Weather Bu- reau; Shreveport Times
Fort Lupton, Colo		7 p. m				Hail	All crops over a path 4 to 5 miles suffered	(La.). Official, U. S. Weather Bu-
Calipatria, Calif	23 25	do		1	100, 000	Violent wind	Warehouse and dwellings on east side of town torn from foundations; Southern Pacific sta-	reau. Los Angeles Times (Calif.).
Columbia, Ky	25				5, 000	Hail	tion cut in half. Much tobacco destroyed and corn injured	Official, U. S. Weather Bu- reau.
Lake MichiganStatesboro, Ga	26 26			4	500	High winds Wind and hail	No property damage reported	New York Daily News. Official, U. S. Weather Bu-
Walhalla, S. C. (near)	26	P. m			700	Thunderstorm and	- <u>-</u>	reau. Do.
Caps, Tex	28	6 p. m			6, 000	wind. Hail	Severe damage to growing crops over path 3 to 4	Do.
Tampa, Fla		5,10-9 p.m_			.,	Thunderstorm and	miles long. Minor property damage. Streets flooded and traffic made impossible: city	Do.
Miles City, Mont						heavy rain. Wind, rain and	and suburban streets and roads badly washed. Corn and truck gardens damaged to some extent	Do.
Electra, Tex	29	4 p. m	1, 760	2		hail. Small tornado	Small houses and derricks blown down; little loss of crops. Path 2 miles long; 2 persons	Do.
Clark County, Wis	29	do	60–1, 760		6, 500	Severe squall	injured.  Damage principally to silos and small farm buildings; 7 persons injured.	Official, U. S. Weather Bureau; Milwaukee Journal (Wis.).
Superior, Wis. and Duluth,	29	P. m				Severe electrical	Many trees prostrated; grounds washed. One	(Wis.). Milwaukee Sentinel (Wis.).
Minn. Dallas, Tex. (north of) Fort Wayne, Ind	30 30	5 p. m		<u>-</u> -		Wind and rain Wind	person injured. Several residences damaged; 1 person injured Many boats on Lake Wawasee imperiled, trees	Dallas Morning News. Indianapolis Times.
Baltimore, Md., and vicinity	31			_		Thunderstorm,	uprooted; many cottages partly wrecked.  Many telephones out of order: other property	Official, U. S. Weather Bu-
,,				_		hail and rain.	and crop damage; 5 persons injured.  Damage principally to apple crop	reau.
Gerrardstown and Inwood sections of Berkley County,	31					Severe hail	Damage principally to apple crop	Do.